

Appn. No. 10/541,580
Amendment dated January 2, 2007
Reply to Office Action dated October 12, 2006

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claim 1 (Currently amended): A pinching detection apparatus comprising:

a pressure sensor disposed along an outer edge of a trunk lid of a vehicle such that the pressure sensor does not come into contact with the body of the vehicle when the trunk lid is closed; and

determination means for detecting that an object is pinched between a body opening section of said vehicle and said trunk lid in accordance with a signal output from said pressure sensor.

Claim 2 (Original): The pinching detection apparatus according to claim 1, wherein said pressure sensor has a flexible piezoelectric sensor.

Claim 3 (Original): The pinching detection apparatus according to claim 2, wherein said pressure sensor has a nonlinear flexible member whose displacement in response to load is nonlinear, and said piezoelectric sensor is disposed adjacent to said nonlinear flexible member.

Claim 4 (Original): The pinching detection apparatus according to claim 2, wherein said determination means determines whether or not said object maintains contact with the object, on the basis of said signal output from said piezoelectric sensor.

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Claim 5 (Original): The pinching detection apparatus according to claim 1, wherein said pressure sensor has a cushioning section which can be compressed by pressing action stemming from pinching of said pinched object.

Claim 6 (Currently amended): An opening/closing apparatus comprising:
a pinching detection apparatus having a pressure sensor laid along an outer edge of a trunk lid of a vehicle such that the pressure sensor does not contact a body of the vehicle when the trunk lid is closed, and determination means for detecting that an object is pinched between a body opening section of said vehicle and said trunk lid in accordance with a signal output from said pressure sensor;

drive means for driving said trunk lid; and

control means for controlling said drive means so as to release pinching when occurrence of pinching has been determined by said pinch determination means on the basis of a signal output from said determination means.

Claim 7 (Original): The opening/closing apparatus according to claim 6, wherein, when closing said trunk lid, said control means controls said drive means so as to close said trunk lid after said trunk lid has once been moved over a predetermined distance in an opening direction.

Claim 8 (New): The pinching detection apparatus according to claim 1, wherein a distance between the pressure sensor and the body of the vehicle when the trunk lid is closed is between 3 mm and 5 mm.

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Claim 9 (New): The pinching detection apparatus according to claim 1, further comprising a seal configured to seal a gap between an opening in the body of the vehicle and the trunk lid when the trunk lid is closed.